

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A cracking tube comprising:

a tube member having an inner surface and extending in an axial direction;

said inner surface of said tube member having at least region Za wherein fins are located ~~[[arranged]]~~ in the axial direction thereof and at least region Zb wherein no fins are presented in the axial direction thereof; and

a plurality of discrete fins, each fin being of an elongated configuration, formed on the inner surface of the tube member and ~~[[arranged]]~~ located on at least one helical locus with a longitudinal axis of the elongated configuration of each fin ~~[[extended]]~~ extending along the helical locus, to define a helical angle ~~[[O]]~~ greater than zero with the axial direction of the tube member.

Claim 2 (Currently Amended): The cracking tube according to claim 1 wherein ~~the fins have an angle of inclination~~ said helical angle of the fin is in the range of 15 to 85 degrees.

Claim 3 (Currently Amended): The cracking tube according to claim 1 wherein assuming that the sum of the circular arc length of fins is TW ( $TW = w \times n$  wherein w is the

circular arc length of the fin as projected on a plane orthogonal to ~~[[an]]~~ the axis of the tube member, and n is the number of fins on one turn of the helical locus), and that the circumferential length of the tube inner surface is C ( $C = \pi D$  wherein D is the inside diameter of the tube), the ratio TW/C is 0.3 to 0.8.

Claim 4 (original): The cracking tube according to claim 1 wherein the fins are weld beads formed by overlaying.

Claim 5 (Currently Amended): The cracking tube according to claim 2 wherein assuming that the sum of the circular arc length of fins is TW ( $TW = w \times n$  wherein w is the circular arc length of the fin as projected on a plane orthogonal to ~~[[an]]~~ the axis of the tube member, and n is the number of fins on one turn of the helical locus), and that the circumferential length of the tube inner surface is C ( $C = \pi D$  wherein D is the inside diameter of the tube), the ratio TW/C is 0.3 to 0.8.